

AUXILIARY FISHING SCHOONER "EVELINA M. GOULART"
Essex Shipbuilding Museum, 66 Main Street
Essex
Essex County
Massachusetts

HAER No. MA-145

HAER,
MASS,
5-ESS,
2-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

REDUCED COPIES OF MEASURED DRAWINGS

HISTORIC AMERICAN ENGINEERING RECORD

National Park Service
U.S. Department of the Interior
1849 C St. NW
Washington, DC 20240

HISTORIC AMERICAN ENGINEERING RECORD

AUXILIARY FISHING SCHOONER EVELINA M. GOULART

HAER No. MA-145

HAER
MASS,
5-ESS,
2-

LOCATION: Essex Shipbuilding Museum Shipyard
66 Main Street
Essex, Massachusetts

DATE OF CONSTRUCTION: 1927

DESIGNER: Jacob Story IV

BUILDER: Arthur D. Story

PRESENT OWNER: Essex Historical Society and Shipbuilding Museum

PRESENT USE: Museum Exhibit

RIG/TYPE OF CRAFT/TRADE: Schooner/Fishing

OFFICIAL NUMBER: 226892

PRINCIPAL DIMENSIONS: Length: 83.70
Gross Tonnage: 82.00
Net Tonnage: 56.00
Beam: 21.20
Depth: 10.20

SIGNIFICANCE: The EVELINA M. GOULART is an example of what is sometimes called a "transitional schooner." These vessels bridged a gap during a period of transition in the history of shipbuilding in America from sail to power. Transitional schooners were neither sailing fishing schooners nor fully powered fishing draggers but an intermediate combination of the two. The end of the working sailing fishing schooners and the beginning of a new era of mechanized fishing draggers began with the construction of the first transitional schooners.

HISTORIAN: Frank P. Lucido
Essex Shipbuilding Museum, 1997

PROJECT INFORMATION: The HAER Maritime Recording Project is part of

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the Historic American Engineering Record (HAER), Eric DeLony, Chief, a long-range program to document historically significant engineering, industrial and maritime works in the United States. The HAER program is part of the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) division of the National Park Service, Department of the Interior, E. Blaine Cliver, Chief. The project was co-sponsored by HAER and by the Essex Shipbuilding Museum. The fieldwork was based on measurements, videotapes and drawings by Erik A.R. Ronnberg, Jr., Roger Hambidge, Leon Poindexter, Nancy D'Estang, and Wayne T. Butler. Frank P. Lucido produced the historical report. Robert C. Stewart of Historical Technologies completed additional measurements, measured drawings and large format photography.

INTRODUCTION

The EVELINA M. GOULART offers a rare opportunity to study a neglected area in the history of the evolution of the American fishing schooner. The focus of maritime history of the 1920s and 1930s had been on racing fishing schooners, such as the GERTRUDE L. THEBAUD. The development of traditional working fishing vessels and the transition from sail to power has received much less attention. The GOULART offers a last chance to study this aspect of maritime history.

The GOULART is the least restored of all the surviving Essex-built fishing vessels, and she retains much of her original construction. Very little documentation exists today concerning construction details and procedures used in building schooners at Essex. The GOULART offers a last chance to acquire some knowledge of both the construction of new schooners and the accurate restoration of the existing historic Essex-built schooners.¹

The GOULART was designed by Jacob Story IV (1894-1939), the eldest son of Arthur D. Story, who built the ship. Upon the death of Arthur D. Story in 1932, Jacob carried on the supervision of the A.D. Story shipyard. Before his own untimely death in 1939, he designed nineteen vessels. Five of the nineteen he built himself, while thirteen came to be called transitional schooners. The GOULART was one of the thirteen transitional schooners.² The vessel was built at the A.D. Story Shipyard in Essex, Massachusetts, in 1927 (launched 29 June 1927); the shipyard was on the site of the present day Essex Shipbuilding Museum Shipyard.³ The original construction price is not known, but surviving crewman estimate it to have been between \$40,000 and \$50,000.

The GOULART used a 6 cylinder 200 horsepower Cooper Bessemer Engine for most of her working life. The engine was not replaced until the 1950s. The 200 horsepower Cooper Bessemer was a slow speed, heavy-duty engine, which had more pulling power per horsepower than do today's high-speed diesel engines. The beam trawlers that fished out of Boston at this time used 500 and 600 horsepower Cooper Bessemer and Morse-Fairbanks engines. These engines were heavy, economical on fuel, needed little

¹ For dimensions listed on title page, see the 1929, 1965, and 1979 editions of United States Department of Commerce, *Merchant Vessels of the United States* (Washington, D.C.: various dates).

² Dana A. Story, *The Shipbuilders of Essex: A Chronicle of Yankee Endeavor* (Gloucester, MA: Ten Pound Island Book Company, 1995), 296.

³ Dana A. Story, ed., *A List of Vessels, Boats and Other Craft Built in the Town of Essex. 1860-1980* (Essex, MA: Essex Historical Society & Shipbuilding Museum, 1992), 10.

maintenance, and were very durable, but were initially expensive to buy.

HISTORY OF TYPE

The EVELINA M. GOULART belongs to a long tradition of boat building in the town of Essex, Massachusetts, the evolution of which spanned several hundred years. The earliest Essex-built schooners were the Chebacco boats of the 1600s. The evolution of hull design progressed until the 1930s with the construction of the magnificent racing fishermen such as the GERTRUDE L. THEBAUD.⁴

The GOULART is termed a "transitional schooner." This type of schooner was built during the 1920s and 1930s and was essentially a sailing schooner hull modified to carry a diesel engine and trawl gear. Transitional schooners were designed as working fishing vessels and their design reflected the most efficient use of the hull for the type of work in which the vessel was involved. These vessels were not particularly beautiful, since people were concerned with economic survival than beauty. The magnificent and graceful racing fishing schooners overshadowed the development of the transitional schooner, as well as the transition from sail to power on American fishing vessels. As a result of these factors, very little has been documented concerning transitional schooners until the GOULART arrived at the Essex Shipbuilding Museum. The GOULART is the last of her type.

The fishing industry and the port of Gloucester experienced some of the greatest changes in their history during the 1920s. During the first six months of 1928, the combined ports of Boston, Portland, and Gloucester landed 131,202,313 pounds of fish valued at \$5,036,675. The same ports landed 142,942,177 pounds valued at \$5,567,616 for the same time period in 1929. Of particular interest was the increasing volume of frozen packaged fish. The extent of this development is suggested by the 37 percent increase in the landings of haddock, the fish most used in this trade by New England ports. The demand for haddock far exceeded the New England fishing fleet's capacity. Statistics compiled by the Fisheries Bureau for the year 1928 revealed that 142,413,890 pounds of large haddock were landed, as well as 12,908,335 pounds of scrod. The landings of large haddock for the first half of 1929 were 91,118,041 pounds as compared to 71,209,144 pounds for the same time period in 1928. Haddock landings since 1927 had increased to over half the total of all species landed in New England ports. Fishing concerns were enlarging their fleets, reconditioning older vessels, and converting flounder draggers to

⁴ The evolution of fishing schooner design has been well-documented in Howard Chappelle, *The American Fishing Schooner* (New York: Norton, 1973); Story, *Shipbuilders*; and William P. Dunne, *Thomas F. McManus and the American Fishing Schooner* (Mystic, CT: Mystic Seaport Museum).

haddock fishing. Boston, which had formerly accounted for 80 percent of New England fish landings up to 1927, was now landing 74 percent and the shift favored Gloucester. In addition, to supply the ever-increasing demand for frozen packaged fish, more New England vessels were fishing with trawl nets. Over 288 vessels were outfitted with otter trawls and fished out of Boston, Gloucester, and Portland. Landings in 1928 were greater than at any time for which records were kept.

Modernized methods of freezing and packaging fish made the product more marketable to a larger segment of the population.⁵ The idea of filleting, freezing, and packaging fresh fish was to revolutionize the fishing industry, fishing vessel design, and ultimately the entire landscape of Gloucester Harbor. The process of quick freezing fresh fish began with Clarence Birdseye. On a trip to Labrador for furs, he observed native peoples quick freeze their fish on the ice immediately after catching the fish. Cleaned and gutted fish were frozen solid, retaining a much higher quality of freshness than salted fish.

Birdseye set up his fish operation in Gloucester, then the leading fishing port on the East Coast. He based his method on the native Eskimos' quick freeze method. Cold storage had existed prior to this but the fish was frozen in the "round." In 1925, Birdseye developed his idea of filleting, wrapping, packaging, and then freezing fish. Prior to this frozen fish were shipped inland and later filleted and salted upon reaching their destination. The quick freeze method revolutionized the market. People could now have wrapped filleted fish shipped frozen and ready to cook, retaining a high quality of freshness. Frozen filleted fish shipped inland quickly displaced the salt fish market as more people began to taste and eat frozen fresh fish. Birdseye called his new company General Seafood. Postum Company of Michigan became interested in the process, and in 1928 General Seafood was incorporated. It diversified into the processing of many foodstuffs, but the Gloucester branch remained the frozen seafood division and was called General Seafood.

The effect on the Gloucester waterfront was the eventual replacement of all salt fish establishments by quick freeze operations. The many small, independently owned salt fish companies were quickly bought out by corporations such as General Seafood or Gorton Pew, which could afford the equipment necessary to set up a quick freeze operation. Companies such as Reed and Gamage, Davis Brothers, and John Pew and Sons all became incorporated into Gorton Pew Fisheries. All the fishing schooners that these companies owned became part of the Gorton Pew fleet.⁶

⁵ "Packaged Fish Shows Big Gain," *Gloucester Daily Times* (hereafter cited as *GDT*), 11 August 1929.

⁶ "Toward an Oral History of Cape Ann," Gloucester Arts and Humanities, 1979, located in the Sawyer Free Library, Gloucester, MA. The information concerning

The fishing technology then called otter trawling was the most efficient way to meet the increased demand for fresh fish. A greater volume of fish could be taken by the trawling method than with the now obsolete dory trawling method. Otter trawling was much safer and more efficient, yet more expensive to own and operate. Most vessel owners could not afford to convert to steel-hulled steam powered trawlers. The cost of the hull and power plant as well as the port facilities necessary placed this type of fishing in the hands of corporations with wealthy backers. The process began in 1904 when a group of investors in Boston formed the Bay State Fish Company and had a new steam trawler built. It was launched in 1905 and named the SPRAY. The number of Bay State Fish Company trawlers increased from three in 1910 to six in 1911; by 1915, there were twelve, and by 1920, there were fifty-five steam trawlers fishing out of Boston.

In 1921, Thomas F. McManus designed a schooner named the BLANCHE RING that was the forerunner of what came to be called the Eastern Rigged Dragger. Modifying a schooner hull for power, McManus' design was a success and other builders created their own versions. The term "dragger" was used to distinguish these wooden trawlers from the larger steel-hulled vessels, but the equipment and work differed only in size. Draggers at this early stage retained the schooner rig and usually had a pilot house mounted aft when fitted out for dragging.⁷

These draggers were powered by diesel engines, which were safer and less expensive to operate and maintain than steam engines. They carried no dories, and the crew worked from the deck of the vessel, eliminating the need for a large crew of fishermen to man the dories. Moreover, since they did not require a large crew of engineers to shovel coal into a steam engine, it was now feasible for an individual without corporate backing, such as Manuel Goulart, to own and operate his own vessel. New England fishermen were thus allowed to maintain their independence in the face of increased corporatization of the fishing industry. Schooners, now modified in design for diesel engines and dragging,

Clarence Birdseye was taken from an interview with Robert Merchant who began as a dory fisherman and became plant manager of General Seafood from 1946 to 1954. He was a longtime acquaintance of Clarence Birdseye.

⁷ Erik A. R. Ronnberg, "The EVELINA M. GOULART," *Nautical Research Journal*, June 1993, 98-99.

continued to be built throughout the 1920s and 1930s.

Captain Manuel Goulart, a native of the Azores, had been skipper of the SADIE M. NUNAN, a highliner of the swordfishing fleet out of Gloucester. In 1925, Goulart had his own vessel built at the A.D. Story Shipyard. The vessel was launched on February 23, 1925, and christened by his young daughter Evelina. Named the EVELYN M. GOULART, it was 72.4' long with a breadth of 20.50'. Captain Goulart took the vessel dragging and swordfishing. By 1927, he decided that it was too small, and a larger vessel was commissioned at the same shipyard. This vessel would be the EVELINA M. GOULART, named after his daughter who was now too sick to attend the launching on June 27, 1927. Evelyn Roderick, the daughter of Evelina's godmother, christened the vessel. Young Evelina died within the year. The new vessel was towed around to Gloucester by tugboat to be fitted out, as was the practice at this time. She was docked at Steamboat Wharf, where her cement and ballast were put in.⁸

She had been launched in time for the swordfishing season and could be fitted out for this type of fishing at a lower cost than for dragging. It was hoped that she could earn enough money swordfishing to cover the costs for dragging gear in the fall. It is unlikely, however, that the GOULART was very successful at swordfishing during her first year. Several weeks after the GOULART's launching, at about the time she was ready for fishing, swordfish were reported as being scarce. The swordfishing receipts were about 50 percent less than in 1926.⁹

Throughout 1927 and 1928, the GOULART dragged for haddock. On May 28, 1928, she landed 55,000 pounds of haddock, 3,000 pounds of cod, and 6,000 pounds of mixed fish.¹⁰ This was consistent with the pattern followed by most Gloucester draggers. They would drag for haddock during the spring, winter, and fall, and fish for swordfish during the summer. More money could be made swordfishing, but these migrating fish were around only from May to September. Summer swordfishing was considered a pleasant vacation and offered some excitement when compared to the daily grind of dragging for groundfish.

Following World War I, haddock became the leading fish on the market, and it was

⁸ GDT, 30 June 1927, 8. It was common practice at the Essex shipyards to launch vessels without ballast or spars due to the shallowness of the Essex River. The vessels were towed by tug to Gloucester where the outfitting was completed. The earliest photo of the GOULART dates from the summer of 1927 and depicts the vessel rigged for swordfishing.

⁹ GDT, 1 August 1927, 8.

¹⁰ GDT, 28 May 1928, 8.

landed in great quantities. Between 1927 and 1930, all-time high quantities were taken. The trend away from cod to haddock as a leading market fish was directly related to fish preservation methods. Haddock was not well suited to salting and drying since its flesh was too flaky and would fall apart when dried out. Consequently, it had been limited to the fresh fish market and sold mostly along the coast. The introduction of Birdseye's quick freeze method combined with the filleting process caused a tremendous increase in the market demand for haddock. People could now have fresh white haddock as opposed to dried salt cod, and their preference was for the haddock. Landings of haddock at Boston increased from 74 million pounds in 1920 to 190 million pounds in 1930.¹¹ The growth of a national market led to more intensive fishing for haddock, and fishing vessel design and equipment were modified to reflect the change in fishing techniques.

The GOULART's dragging methodology was typical of her type. The vessel first stopped in the water with the trawl net to the windward side. The trawl net would be on deck with its 700-pound wooden doors hanging from two metal frames called gallows. Wire cables led from the motorized winch to blocks on the gallows to attachments on the doors. Once the trawl net was in the water and moving away from the vessel, the trawl was ready to be lowered. The captain would take his place on the bridge, while the mate and one man were on the winch, and the others stood by at the gallows. Slack was given on the wire cables as the 700-pound doors drew the trawl net to the bottom. The captain gave a signal, usually a blast from the boat horn, and the vessel began to steam ahead. The mate watched the amount of tackle taken out. When he estimated that about three times the water's depth had been taken out, he applied brakes to the winch.

The trawl net was spread about 70' across and about 7' to 9' high at the open end as it moved across the bottom. The net tapered aft about 130' to the opposite end, called the cod end. The vessel towed ahead at about 3 knots for about one hour, sweeping a path across the ocean floor about 60' wide and 3 miles long. The actual length of time that a vessel towed depended upon the species, the fishing grounds, or the time of day, since some species of fish came off the bottom at night.

To haul back the net, the winch began pulling in the wire cable and drawing the net up to the surface. Once the doors reached the gallows frames, the open end of the net was gathered, and the crew hauled the net until the cod end was reached. As the net moved across the bottom, fish were forced back into the net from the open end to the cod end, where they were trapped. A tackle from the foremast hoisted the cod end up from the deck. The cod end knot was released, opening this end of the net and the fish spilled out

¹¹ U.S. Department of the Interior, Fish and Wildlife Service, *Groundfish Industries of New England and Canada* (Washington, D.C.: Government Printing Office, 1961), 40.

on deck, where they were then sorted. Marketable fish were gutted and packed away in ice below deck. Another trawl net would be set or the same net quickly repaired and set again before the crew began to cull and gut the fish.¹²

In part because of its unique equipment, the GOULART usually carried about nine or ten men while dragging. Unlike most draggers, the vessel always carried riding sails to steady the vessel in the water and prevent it from rocking and touching or snagging the trawl net. The crew earned about \$75 each per trip during the early 1930s.¹³ By June 3, 1928, the GOULART was fitting out for swordfishing at the Parkhurst Railway in Gloucester.¹⁴ Setting the pattern she would follow for most of her working life, the vessel swordfished from May to September on trips averaging about two weeks and dragged the remainder of the year. This was typical of many Gloucester vessels of the period, particularly those of the large Portuguese fleet.

Most of the discussion has been on dragging and its influence on vessel design, yet the GOULART's claim to fame were the records that the vessel set while swordfishing. Little has been documented concerning this branch of the fisheries, particularly during the GOULART's era. Swordfishing enabled fishermen to earn a respectable sum of money for a short summer's work. Before World War II, vessels could do as well or better swordfishing than they could dragging. The work was not as arduous as dragging, though it could be very dangerous due to the apparently bellicose nature of the swordfish. It was very exciting, involving spotting the fish from high aloft in the forecrosstrees, the thrill of the chase, and harpooning the fish. A culture grew up around this industry with its own rhythms, language, and terminology. The ethnic composition of the swordfishing fleet was predominately Portuguese, although some fishermen from Nova Scotia or Newfoundland were also involved. They fished as an all Canadian crew or as non-Portuguese crewmen scattered throughout the Portuguese fleet. The same would be true of any of Yankee ancestry still involved in swordfishing.

¹² Andrew W. German, "Otter Trawling Comes to America: The Bay State Fish Company, 1905-1938," *The American Neptune* 49 (Spring 1984): 118-119.

¹³ This information came from an interview with Leo Riberio. Written transcripts of interviews are contained in the Essex Historical Society & Shipbuilding Museum's Oral History Project, conducted in 1993 by James F. Gillespie and Paul M. Blank, graduate students at Northeastern University. (Hereafter cited as EHSSM Oral History Project.) Interviews were held with Leo Riberio, an engineer and crewmember aboard the GOULART during the 1950s, and Robert M. Spanks, son-in-law of Teutonio Loges, a shareholder and crewman aboard the GOULART. This information came from Leo Riberio.

¹⁴ *GDT*, 3 June 1928.

Before the Civil War, swordfish were salted and sold primarily to the southern states or to the Caribbean as food for slaves. George Brown Goode recorded that in 1878 only one vessel out of Gloucester was engaged in the swordfishing industry. The continuance of this branch of the fishery seemed uncertain to Goode at this time. Most vessels that did take swordfish were actually mackerel seiners that carried gear for the capture of swordfish. The first record of swordfish being fished in North America as a food fish was in the 1840s at Martha's Vineyard where the meat was salted and pickled. The first swordfish brought into the port of Gloucester that Goode could record was in 1831. It was salted and sold at \$8 a barrel. Apparently the profit incentive was not sufficient to drive a fishermen to face a 450 pound fish.¹⁵

The fresh fish market for this species developed around New Bedford, Fall River, and Providence. In the 1870s the price at New Bedford began at 20 cents per pound upon arrival of the first fish and leveled off at 10 cents per pound within forty-eight hours. In Gloucester prices ranged from 2 cents to 5 cents per pound.¹⁶ In the late nineteenth and early twentieth centuries, fleets of swordfishing vessels sailed from many areas of New England: the coast of Maine, Provincetown, Woods Hole, Gloucester, New Bedford, and Stonington, Connecticut. Canada also had a considerable swordfishing fleet, composed of dory schooners from Yarmouth, Shelburne, Lockeport, Lunenburg, and other ports further eastward in Nova Scotia.

By 1906, about twenty-six years after Goode's writing, a large fleet of swordfishing vessels was outfitted at Gloucester for the summer. The schooner RITA VIATOR, for example, under Captain William Enos, took 124 swordfish on one trip. The total stock was about \$4,000, and each crewman received \$107.¹⁷ In 1919, the schooner SADIE M. NUNAN, of which Manuel Goulart was in command before the EVELYN M. GOULART, arrived in Boston with 147 swordfish that sold at 32 cents per pound; the trip stocked \$7,000 and each crewman received \$580.¹⁸ In 1926, one year before the GOULART's launching, on one day fifteen vessels were outfitted for swordfishing and returned with a total of 1,541 swordfish.¹⁹

During the period 1880 to 1900 a substantial market for fresh swordfish had developed, making it worthwhile for many vessels to outfit for swordfishing for the entire summer.

¹⁵ George Brown Goode, *The Fisheries and Fisheries Industries of the United States: History and Methods of the Fisheries* vol. 1, section 5, (Washington, D.C.: Government Printing Office, 1887), 322-324.

¹⁶ Goode, *Fisheries*, vol. 1, 325-326.

¹⁷ "Splendid Stock," *GDT*, 31 August 1906, 1.

¹⁸ "Crew's Share \$580.00 in Three Weeks," *GDT*, 9 August 1919, 1.

¹⁹ "More New Records at Boston Pier," *GDT*, 6 July 1926, 1.

Prices for fresh swordfish rose tremendously, as did the number of vessels engaged in swordfishing. Most of the swordfish marketed during this period was sold locally as fresh fish, first around New Bedford and Fall River, and later during the 1880s around Gloucester, Portland, and Boston. It was not until the early 1900s that fresh swordfish began to become popular among consumers. It was only with the advent of ice and refrigerated cars that the fresh swordfish industry began to bloom. The fish could now be shipped fresh to locations other than the ports in which they were landed, and the industry caught on among consumers. During the same period that Goode recorded one vessel swordfishing out of Gloucester in 1878, he recorded thirteen vessels sailing out of New Bedford. He stated that the market first developed here and gradually spread northward to Boston.²⁰ There seems to be a correlation between the development of the swordfishery and the development of the Portuguese community in southeastern New England. In this same time period, Goode recorded that about one-third of the personnel of the New Bedford whaling fleet were Portuguese from the Azores or Cape Verde Islands.²¹ The Portuguese were beginning to arrive in and settle around New Bedford and Fall River. They would ship aboard whalers from New Bedford in the Azores, some would eventually settle in New Bedford and later send for their families.

In Gloucester there were about 200 Portuguese families by the year 1888, making it one of the largest Portuguese communities on the East Coast of the United States. Most of these families were from the Azores as opposed to mainland Portugal. On July 9, 1893, a Portuguese national parish, Our Lady of Good Voyage Church, was dedicated in Gloucester in order to minister to the town's growing Portuguese population. By the first decade of the twentieth century, there was also steady immigration from mainland Portugal. Many of these Portuguese fishermen had fished with the Portuguese salt cod fleet. These vessels fished with single dories, one man, as opposed to two men per dory as was customary on American vessels. As a result of this practice, the Portuguese developed as some of the best dorymen in the New England fishing fleets, a quality which would account for their success in the swordfishing industry.

The large influx of Portuguese into New Bedford and later into Gloucester, as well as the fact that most of the vessels engaged in swordfishing out of Gloucester were owned and operated by Portuguese fishermen, would certainly indicate that they provided both the market and the source for the fresh swordfishing industry in its early years. They arrived at exactly the same time period that prices rose for this fish, and that the volume of fish caught rose. Certainly the Portuguese were one reason for the beginning of a swordfishing industry in this country.

²⁰ Goode, *Fisheries*, vol. 1, 325-326.

²¹ Goode, *Fisheries*, vol. 2, section 5.

Swordfish had been seen in large quantities prior to this, yet had never been fished in any significant numbers. Swordfish had been fished and eaten in Portugal and other countries of the Mediterranean since antiquity, and the skills in hunting and capturing these fish had been acquired long before a swordfishing industry existed in North America.

The very beginnings of a swordfishing industry date back to the written records of the peoples inhabiting the shores of the northern Mediterranean Sea. The Greek geographer Strabo, writing about 2,000 years ago, described swordfishing at Scylaeum on the Straits of Messina. His description of swordfishing 2,000 years ago was essentially the same method as that used in New England in the twentieth century:

One lookout directs the whole body of fishers, who are in vast numbers of small boats each furnished with two oars and two men to each boat. One man rows, the other stands on the prow, spear in hand while the lookout has to signal the appearance of swordfish. As it passes the boat, the fisher darts the spear from his hand and when it is withdrawn it leaves its sharp point, with which it is furnished, sticking in the flesh of the fish. This point is barbed and loosely fixed to the spear for the purpose. It has a long end of line fastened to it: this they pay out to the wounded fish until it is exhausted with its struggling and endeavors to escape. Afterwards they trail it to the shore or unless it is too large, haul it into the boat. If the spear should fall into the sea, it is not lost, for it is jointed of oak and pine, so when the oak sinks on account of its weight, it causes the other end to rise and thus is easily recovered. It sometimes happens that the rower is wounded even through the boat and such is the size of the sword with which the swordfish is armed such is the strength of the fish and method of capture, that is not surpassed by the chase of the wild boar.²²

Such was the legacy of the EVELINA M. GOULART as a vessel of the Portuguese swordfishing fleet out of Gloucester. The GOULART was a Portuguese boat to the core. The majority of her owners and about 95 percent of her crew at any time in the vessel's working life were Portuguese.

By 1927, the year which the GOULART was launched, vessels would be hauled up on the railways for about a week in order to be fitted out for swordfishing. This process would usually begin around May or early June. The GOULART would usually be fitted out at Parkhurst Railway in Gloucester.

²² E. W. Gudger, "Tales of Attacks by the Ocean Gladiator," *Natural History* 41, no. 2: 129-130.

This process involved removing all the gear required for dragging. Trawl nets were removed and stored away. The temporary pilot house over the after cabin was removed. The trawl winch used for hauling in the net was stored away. The GOULART's trawl winch was located just aft of the mainmast. The gallows frames and trawl doors were also removed and put away until the end of the swordfishing season.

The swordfish outfit included a 20' long bowsprit for a vessel from 75' to 85' long. These bowsprits were similar in diameter and taper to bowsprits used on sailing schooners. Other than for swordfishing, the bowsprit by this time was obsolete, since most schooners were powered by diesel engines and carried no jib sails. The sails that the GOULART did carry were used for steadying the vessel and for cruising with the engine off. The bowsprit came through a hole between the bulwarks and the top of the stem. They had a tenon on the butt that often went into a mortise at the wooden double bitts, which many schooners similar to the GOULART carried. The end of the bowsprit was fitted with a cast iron striker's pulpit. The pulpit had a ring of galvanized iron, which fitted around the bowsprit. There were straps on each side that ran 2' or 3' back along the bowsprit and had bolt holes, which were bolted through from side to side. Outboard from the end of the bowsprit was a small square grate about 15" x 15". From the grate rose four rods on each of its corners that were all welded or bolted into a curved collar which ran into a semicircle across to the forward rod on the other side and then to the after rod on the same side. The pulpit was 40" to 44" high. The semicircle of iron was about 1/2" thick by about 3" to 4" high. The collar extended back far enough so that the striker could attach a strapped seat to holes in the collar and sit down. Back from the collar and aft of the after rods were two more rods that went back and down to the bowsprit at a 60 degree angle. These rods had flattened pieces on the end that were bolted into the bowsprit for extra support. The collar was wrapped with burlap strips and then tightly served with 1/4" thick warp line. The purpose of this was to make a secure place for the striker to tie the "pig strings" (short pieces of line on either side of the collar to which the striker tied his pole). The "bib line" was also tied to the pulpit. This line was tied to the end of the pole and to the pulpit, and its purpose was to allow the striker to retrieve the pole after he threw it at a fish.²³

The rigging of the bowsprit consisted of a foretopmast stay coming down to a collar on the bowsprit, which was directly behind the striker's cage. Behind the foretopmast stay was another stay, which ran from the hounds of the foremast where the stay was shackled

²³Unless otherwise noted, information regarding swordfishing was gleaned from a series of interviews with R. Barry Fisher of Newport, Oregon, conducted by Frank Lucido of Essex Historical Society & Shipbuilding Museum (ESSHM). Mr. Fisher spent many years as a doryman and swordfishermen out of Gloucester, MA, in the 1940s and 1950s. Although he never worked aboard the GOULART, he was very familiar with the vessel.

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into a wire strap that had been served around in back of the foremast. There was a bobstay running underneath from the end of the bowsprit to a galvanized strap fastened and bolted to the stem just at the water line. There were also two side stays that ran from one of the iron collars at the end of the bowsprit and fastened just forward of the vessel's foremast shrouds. All stays were made of 3/4" diameter galvanized steel wire. The turnbuckles to give tension to the stays were out on the end of the bowsprit. Side stays had turnbuckles shackled to the inboard side of the bow. Canvas was usually lashed over the bobstay turnbuckle to prevent harpoon lines getting caught up on the bobstay. A 3/4" manila line was rigged between the foremast stay in the bow and then out to the stays running to the bowsprit, which would enable the striker to steady himself as he walked to and from the end of the bowsprit. Caution had to be exercised in rough weather to prevent the striker from being washed out of the pulpit. When the vessel was not swordfishing, a plug was put into the hole above the stem after the bowsprit was removed.

The foretopmast was fitted out with a specialized rig required for the lookouts or spotters. This rig was capable of supporting the weight of five men in the foretopmast. The mastheadman was at the peak of the mast. He was supported there by a round steel collar, which was padded with strips of burlap, cloth, or twine. The collar was attached to the mast top and formed a semicircle behind the mastheadman on either side past his rib cage. There was a small step at the masthead where he would rest his feet. A strong board with safety clips hooked into eyes at each end of the collar was his seat. A canvas safety belt was sometimes used. The belt was fastened to holes at the end of the steel collar.

The topmast was rigged with ratlines made of 1/4" tarred manila, which was fastened with a clove hitch onto the foretopmast. The end on each side was taken out to the foretopmast shrouds and seized fast with a cross seizing of tarred twine to the foretopmast shroud. The ratlines were about 12" apart going up from the crosstrees of the foretopmast. About 6' down from the mastheadman's board was another board, which was seized to the foretopmast shroud and there was a seizing where the board met the foretopmast. Holes were often bored in the center of the board, which was then placed or run down the topmast for the correct distance and lashed.

Thus there was a mastheadman's collar with two boards located about six feet below the board on which the mastheadman rested his feet. These boards were about six feet apart and located on the port and starboard. The men stationed here had hoops lashed onto the foretopmast shroud on one side and to the mast on the other. The hoops were made of wood and were also padded. The lower mastheadmen also had canvas seats to support the body. There was room in the crosstrees of the foremast for the extra men to stand as lookouts and most vessels had a canvas seat about two thirds of the way up from the deck

to the foremast cross trees for the first doryman to sit if fishing was particularly good. Harpoons, lily irons, buoy coil, and several dories would also be needed. The GOULART would usually carry about six dories. One was always kept as a spare.

A swordfisherman was outfitted with five or six dories, which were stacked one inside the other and placed in a cradle or wooden brace on the port side of the vessel. The top dory in the stack was rigged with all of its gear. This included three oars, a weight in the stern, a spare 100 fathom warp line, a bow roller, lance, gaff, water bottle, and the thwarts already set up. All this gear could not fit into the dories below and have the top dory nest well. Sometimes the gear would be stored in the top dory and as that went overboard the extra gear would be thrown into the dory below.

In a 1927 photograph, the GOULART can be seen outfitted with a fore and main boom. She was equipped with a fore gaff only, the main gaff being eliminated. The vessel was equipped with a foresail and mainsail only, the mainsail being a "leg of mutton rig." Before about 1910 most of the swordfishing vessels were powered exclusively by sail. When a fish was spotted, two or three men would have to come down from the masthead to assist the skipper in handling sheet lines on the sails. Vessels usually fished with the fore-staysail and the boom and gaff foresail and mainsail. The use of powered vessels would produce an increase in the landings of swordfish since vessels were no longer rendered immobile by calm winds. It was usually during such calm periods that finning swordfish were most easily spotted. Many fish were lost to sailing schooners during such calms. Some fishermen claimed to have tried to harpoon swordfish from a dory during such calm periods. They would wrap the oars and thole pins in burlap to deaden the noise. One man would row while another was stationed in the bow with a short harpoon. They caught few fish in this manner but it was better than staying becalmed on the vessel.

A swordfishing vessel would usually stock enough food for a three-week trip. For a ten-man crew, which would be average for a swordfishing vessel, the grub bill would be about \$230, over \$100 of which was spent on meat.²⁴ Judging by the food bill, fishermen ate very well in comparison to other seamen of the nineteenth and early twentieth centuries. On a Portuguese vessel, fish was served much more often than meat.²⁵

²⁴ Charles Olson, *The Journal of Charles Olson Archives* (Storrs, CT: University of Connecticut Library, 1977), Journal No. 73: 1. In 1936, writer and poet Charles Olson made a swordfishing trip aboard the schooner DORIS M. HAWES, which was a transitional schooner contemporary with the GOULART. Olson kept a journal of the trip, which is an excellent account of life on a swordfishing vessel.

²⁵ Sandra L. Oliver, *Saltwater Foodways* (Mystic, CT: Mystic Seaport Museum, Inc., 1995), 135.

Fitting out was usually a house cleaning time when vessels would be cleaned and painted. The paint schemes on swordfishing vessels could sometimes be quite unusual. Dories could be painted white and red with a white spot in the center of the red section. Kegs were painted red and white and ventilators were often painted red.²⁶ The schooner *MOTOR*, for example, had red topsides with the bottom painted green. The deck, deck structures, and inside bulwarks were all of different colors. The head was yellow with white hawse pipes, and a white waterline was added. The crew somehow believed that the bright colors would attract swordfish.²⁷ The paint scheme did serve the practical purpose of increasing the visibility of the vessel at sea, particularly the dories and buoy kegs, which were sometimes difficult to spot.

When fitting out was complete, swordfishing vessels of the Gloucester fleet would leave for the banks usually about June 22 or 23. They would first go to the canyons and work their way up to the southeastern part of Georges Bank along the 100 fathom curve. By July 10, the vessels would be up to the northeastern peak of Georges. They would next move to the west along the northern edge of Georges Bank to the 67 degree west longitude line. As the season wore on, especially in August, the fish caught would be progressively bigger. Fish caught around Block Island would average about 120 pounds dressed, while those caught on the southeastern part of Georges would be 130 to 140 dressed. Those caught on the northeastern peak would average 160 to 170 pounds dressed. Fish caught on the northern edge would be well over 200 pounds, and those caught late in September on the northern edge would weigh around 290 to 300 pounds.

Another destination was the White Water of the Grand Bank (the southern edge). It was claimed that these fish were huge and rarely spotted on the surface. There were fewer fish caught, but those caught averaged close to 400 pounds, so the added weight more than made up for their scarcity. Few vessels would fish here since the fuel bill for a 1,300 mile run from Gloucester could mount just on the way out, so it was a big gamble if few fish were caught.

²⁶ Charles W. Fifield, Jr., *Along the Gloucester Waterfront* (Gloucester, MA: Cape Ann Ticket and Label Co., 1955), 43.

²⁷ "Painted in Many Colors," *GDT*, 28 May 1910, 8.

If the vessels arrived early the crews would spend time "gamming" one another. This involved visiting back and forth between vessels. American, Canadian, and Portuguese schooners would gam one another, particularly after sundown. Crews would exchange news or discuss the location of swordfish. There would also be a clandestine trade in the sale of Canadian swordfish livers, which would be brought into Boston by American vessels and sold for \$1.25 a pound. The Canadians could get only a few cents per pound. The livers were used to make a high-grade vitamin A pill. By 1948, the chemical equivalent of the swordfish livers had been synthesized and the market died. American vessels would also buy cigarettes for the Canadians since cigarettes were more expensive in Canada. The Canadians would trade with whiskey bought out of bond, which made it much cheaper. A five-gallon keg of black rum sold for \$10 or \$11.²⁸

When cruising for swordfish, the mastheadmen were stationed in the rigging of the foretopmast to act as lookouts. This was a particularly dangerous job. Charles Olson gives us some idea of what it was like to be a mastheadman aboard the DORIS M. HAWES. He writes on a swordfishing trip in July of 1936:

I mounted the first crosstree board and had hung there during the roughest sea that I had yet experienced aloft. So like riding a sea horse it is to sit up that board and hold only by a single rope of the rigging like a bridle, while the vessel 60 feet below rises on a swell, plunges downward suddenly to be brought up as the next swell makes up, brought up like a stumbling nag, which throws you if you do not let the body swing in its broken rhythm. And when broadside to the waves to be swung to port and starboard like a masthead light at night.²⁹

Besides the obvious danger of falling from the foretopmast, mastheadmen had to face the danger of electrocution. Swordfishing season was also the season of summer thunderstorms and it was not uncommon for mastheadmen to be struck by lightning. Crewmen John Mello of the schooner NATALIE S. of Gloucester was killed instantly when, after being warned by the captain to descend, he became entangled in his safety strap and was struck on the head by a lightning bolt and killed. It traveled down his back and ripped off his oilskin jacket.³⁰

²⁸ Guy D'Entremont, personal communication, September 1995. Mr. D'Entremont was a swordfisherman out of Canso, Nova Scotia, who had extensive experience fishing throughout the twentieth century. He fished for swordfish in the vicinity of Brown's Bank.

²⁹ Olson, *Journal*, 11.

³⁰ "Lightning Bolt Kills Fisherman on Local Trawler," *GDT*, August 11, 1930, 1.

Precautions would have to be taken to protect the eyes since damage to the eyesight would result from long hours of staring out to sea in the glaring sun. The men would wash their eyes out with boric acid or a mild solution of tea. To protect the lips, which tended to sunburn and blister badly, the men would often use a pale lipstick. With dirty smelly clothing and about two weeks worth of whiskers, five or six men wearing lipstick could be quite a sight. The men would also take some soot from the galley stack and smear it under their eyes to reduce the sun's glare.

The mastheadmen would begin their work soon after dawn on clear days. On foggy days they would begin an hour before slack water. Since vision was better when closer to the water in a fog, it would not be necessary to climb all the way up. The mastheadmen looked for swordfish in a systematic manner. If they were looking far, they trained their eyes 5 or 10 degrees below the horizon and looked slowly away from the vessel and back in again in slow increments. They would continually repeat this pattern until a quadrant of vision was covered from dead ahead to about 90 degrees on the beam.

It was fairly easy to spot a finning fish. Small fish usually finned higher than the larger fish. Good vision was prized and every boat had at least three young men whose eyesight was usually better than the old veterans. The older men could compensate by what was called "looking under water," which meant that they would not spot finning fish, but would spot swordfish by the royal purple color of their fins. They could also spot fish in back of the vessel when they came up in the vessel's wake.

When a swordfish was sighted the mastheadmen would signal down to the man at the wheel. The GOULART was equipped with a bell connected electrically from the masthead to the steering area. The GOULART's signal was two rings if the fish was on the port side and one ring for starboard. The GOULART carried two generators for electricity. One was a Lister Generator for use when the main engine was shut off. The main generator was for use when the engine was running.³¹ Aboard the DORIS M. HAWES, the mastheadmen would simply yell out port or starboard and the captain would give a blast on the boat horn to alert the crew. Often some devious fisherman would nail a swordfish fin to a log to fool some hapless mastheadman aboard another schooner.³²

Swordfish would usually spend their time feeding at about ten to thirty fathoms below the surface. When the swordfish surfaced it was usually to rest and doze in the sun. If a fish was circling, it usually meant that it had just surfaced. It would circle four or five times and then start swimming very slowly in the direction of the current. After a fish was sighted, the mastheadman would line the vessel up to give the striker the best

³¹ EHSSM Oral History Project, interview with Leo Riberio.

³² Olson, *Journal*, 13.

combination of sun and sea. The ideal was no glare from the sun and as little movement as possible from the vessel. As the vessel bore down on the fish, the mastheadman would attempt to direct the vessel so that the striker's pulpit was a bit to the starboard of the fish if he were right handed and the reverse if he were left handed. If the fish circled, the mastheadmen would direct the vessel with the line of the vessel slightly ahead of the direction in which the fish turned. The skipper usually acted as helmsman with the engineer at the wheel in order to give him a break. It took teamwork between the mastheadmen, the engineer, the helmsmen, and the striker in order to have a successful trip. The vessel had to be maneuvered to a spot where the fish was likely to pass. This was difficult since the swordfish often traveled in a circular path.³³

When the vessel was close enough, the striker would harpoon the fish. Before striking, the striker would hold the harpoon horizontally, resting it on top of the pulpit. The striker would throw the harpoon out in front of the vessel giving him a much broader target than if the fish were closer to the vessel. The harpoon consisted of a wooden pole about 20' long. Attached to the pole was a metal shaft called the lily iron. The dart was attached to this lily iron. The dart had two flukes, the first fluke and the point were well sharpened. The second fluke curved upward into a 45 degree turn at its rear end so that when tension was applied, the dart would turn sidewise following the curve of its rear flukes and stop at a 90 degree angle to the line. The second fluke was not sharpened since it would cut through the fish's flesh. The dart had a strap of 1/4" thick manila line about 2' long, which fitted through a hole in the body of the dart.

The line holding the dart was put onto the lily iron, which was about 2' long. The end of the 100 fathom long warp line was tied with a slip sheet into the dart strap. The warp line went up the shaft of the pole and about 3' from the end a bight would be taken through a thin split of wood about 8" long and taped to the pole on each end. The warp line was then allowed to make a broad loop longer than the bib line, which was the line that held the pole to the pulpit. In this manner if the pole was lost off the pulpit or if it were thrown at a fish, the bib line would become taut before the warp line and would save the striker from having to re-rig the pole if he missed the fish.

The pole was made fast to the striker's pulpit by a line about 20' long, which was spliced into a hole on the end of the pole and then taped. The length of the line depended on the length of the bowsprit and the striker's preference. The other end of the warp line looped down and up again to a wood split on the starboard side of the pulpit. The loop was longer than the bib line. The warp line then ran aft, out board of the shrouds, and was

³³ Fifield, *Along the Gloucester*, 43.

coiled on the deck. The opposite end of the warp line was attached to a keg just aft of the starboard shrouds.

Swordfishing vessels would usually have about ten buoy lines ready to go on the starboard side. The cook's duty was to tend to the buoy lines. When a fish was struck the vessel would turn to starboard, and the cook would snap the buoy line free from the pulpit and haul in the slack until the line ran clear of the starboard quarter as the vessel turned. When the line cleared the vessel's starboard side, he would throw the coils of buoy line overboard in two or three big bights and then throw in the keg.

The first doryman would by this time be coming down from the rigging. The vessel would be idling out of gear and the cook, engineer, captain, and doryman would get the dory outboard over the side of the vessel, with the stern a bit lower than the bow and the dory's bow painter rove through the forward shroud on the port side. Swordfish vessels usually carried their dories in a nest of five or six placed in a cradle on the port side where they were lashed down. Each dory carried three oars, a wood bailer, a roller mounted on the starboard bow of the dory, a 4' long "killing lance" to bleed the fish, a gaff, a cylindrical galvanized steel fog horn, and a spare 100 fathom long warp line coiled in the stern. This line could be tied to the first warp line to give it more slack if they were fishing in waters deeper than 100 fathoms. The killing lance was a wooden shaft about 4' long and 2" in diameter with a black iron 1/4" diameter shaft seized to the lance shaft. The sharpened end was a diamond shaped pointed head. The gaff was a semicircle of steel seized onto the wooden shaft with twine.

The dory would be dropped and, if the fish were close, the doryman would row after him. If not, the vessel would tow the dory up ahead of the buoy and drop him. The buoy was seized with the gaff and placed in the eyes of the dory parallel with the stem. If the doryman knew he was in waters deeper than 100 fathoms, he would immediately tie on the second buoy line. The 100 fathom warp line was made fast to the buoy with a double bighted slip knot. There were eye splices in the warp line at this end which ran free of the knot so that you could bend on the second buoy line but not have to untie it until needed. It only took a quick snap and the line would be free of the becket on the buoy.

When the keg or buoy was aboard the dory, the roller was placed in its chocks and the lance and gaff were placed at hand. There would be two or three straps made of 1" diameter manila in the dory. These were to strap the swordfish by the tail after he was up and dead. The strap would be rigged with the standing part thrown through a long loop on the other end of the strap in the form of a loose lasso.

The doryman would grab the warp line, put it on the roller, and start to pull. The doryman would use nippers, which were tightly rolled pieces of knitted wool covered

with a close weave piece of wool. The roll was stitched tightly down the middle, making a ridge of knitted wool on either side so that when the doryman inserted his hand only slight pressure from the hand would cause a tight grip on the warp line.

Each end of the warp line had a rag spliced into it about 5 fathoms from the end to enable the doryman to be able to tell that he was getting close to the fish. He would bring the fish to within 5 to 10 fathoms from the dory. At this point the fish would see the dory and dive for the bottom. The fish would be let go since he could not be held, but the warp line was held across the front of the doryman's body and with his left hand he held the warp line behind his left hip to add extra strain.

As the fish was pulled in the first time, the warp line was coiled in tight coils on the bow thwart in front of the doryman. As the fish began to run out, the doryman's left hand was held high enough to give the fish extra pressure and to enable the coils to clear themselves and not snarl going out.

The fish would generally stop close to the bottom and fight for a while. Since most fish were ironed through the back and into the abdominal cavity, water under great pressure would tend to flood the abdominal cavity and drown the fish. The doryman would then pull the dead weight up and neatly coil the warp line in front of him.

Sometimes, but not as often, the fish would not dive to the bottom. These were called punchers. Punchers would stay finned on the surface, swimming in big erratic circles. When the doryman began to pull in the warp line, the swordfish would see the line and follow it at great speed punching through the hull of the dory with his bill.

It was not uncommon for a swordfish that was apparently dead to turn on its pursuer when being hauled into a dory. A fisherman aboard the schooner VASCO Da GAMA of Gloucester was hospitalized after a swordfish that was seemingly dead made a swift lunge for the dory when it was within 20' of the boat. It rammed its sword through the dory and penetrated the fisherman's rubber boot and pierced his leg.

A puncher, swimming strongly at a high degree angle close to the surface, was given the side of the dory. A line would be tied to the dory in such a way that the swordfish would be pulling the boat broadside. This would create more resistance in the water and cause the fish to become exhausted sooner. The doryman would move to the center of the dory and hold firm with his body and hands causing the fish to pull the great drag of the dory turned sideways. Once the fish was alongside the dory it would be gaffed in the gills with a hook and loaded into the dory. In order to load a fish that would sometimes weigh as much as 700 pounds into a dory, the fisherman would sometimes deliberately fill the boat with water. With the boat lower in the water, it was easier to get the swordfish inside.

Once the fish was inside the boat, the fisherman would immediately begin to bail the boat out. It was then a matter of waiting for the main schooner to come and pick up the boat. With five or six dories out for different fish, it could be up to six hours before the schooner could get to a dory. Often a fog would set in and fishermen would have to face the possibility of being lost at sea.

Incidents such as this were so common that some fishermen would rig a metal plate similar to a manhole cover, on the bottom of the dory. They would stand on this when hauling in a swordfish.³⁴

Swordfish would often pierce the hulls of the fishing schooners themselves. The schooner PILOT for example, was hauled out at Parkhurst Railway for repairs in 1929 since the vessel began to take on water during a fishing trip. The skipper thought that some caulking had been worked out of the seams. The cause of the leakage was found to be three swordfish bills driven through the heavy oak planking of the schooner's hull by swordfish.³⁵

After a swordfish was hauled in toward the dory, it was bled with the lance, its tail was gaffed and turned upward in the water and strapped. The straps were about 9' or 10' long. One end of the line was taken back and a loop of about 24" to 30" in length was made. The end of the line was then passed through the loop to make a half hitch and the end spliced to the standing part of the line. The half hitch was put in so that the vessel's hook line was not pulling on the splice itself when the fish was boarded. The single standing part of the line was taken under a strap of 1" manila that went through the holes between the dory bottom, side, and frame on each side crossing the dory bottom. These holes were used for drainage and were called "weep holes." The doryman would then make a simple slip hitch around the strap and tie the warp lines, leaving about 20' of slack line so that the fish could be boarded easily by the schooner. If the schooner was some distance away, the doryman would hold an oar in the air as a signal that the fish was secure. An oar up was also a signal that fish were sighted from the dory. Caution was used when making this signal since a fish swimming free belonged to anyone who harpooned it. The fishermen's ethic was that if a vessel was maneuvering to get on a fish,

³⁴ Captain William Shields, personal communication, 1996. Captain Shields worked out of Gloucester for many years. He had much experience as a seaman aboard oceanographic research vessels such as the ATLANTIS, based out of Woods Hole, MA. He was also a member of the crew of the GERTRUDE L. THEBAUD when she raced against the BLUENOSE in the 1930s. Now in his eighties, he is the last survivor of the THEBAUD's crew and an invaluable source of information on the fishing schooners of the early twentieth century.

³⁵ "Three Swords in Vessel's Planks," *GDT*, 20 July 1929, 8.

another schooner respected the other vessel and did not attempt to get the fish themselves.

If the schooner had ironed more fish and had more buoys in the area, the doryman would bring the fish into the dory and row to the nearest buoy. A swordfish was rolled onto the dory by making sure that its tail was high out of the water on the strap. The doryman would go aft with the gaff and pull the fish's head and back to the surface. The doryman would then hold the gaff with his left hand, hook the fish's gills with it, and put his knees on the dory riser. Then he would lift the swordfish's head up, get his right arm over the junction of the head and sword, roll down, pull, and use his right arm as a lever on the sword and roll the swordfish into the dory. If the fish was large, the doryman would take the buoy keg, hang the back strap of the keg onto the thole pins forward of where the fish was strapped. He would loop the warp under the bow of the dory, pull it tight on the other side, and figure eight it on the thole pins of the port side. He would now have quite a bit of buoyancy to lift a big fish as he rolled the gunnel down. Before this was done, the doryman had to be sure that the fish was dead. A dead fish was recognized by the change in body color. A living swordfish had a royal purple back with a silver belly. When dead, however, its body color changed to a brown back with a gray silver bottom.

The schooner at this point would come upon the dory with its starboard side to the dory. The doryman would throw the painter aboard and the cook would make it fast to the shrouds. The engineer would swing out the block and tackle line used for boarding the fish. This line was placed into the loop of the strap, and once the engineer had the weight of the fish on the capstan, the doryman would snap out the slip knot, and move forward in the dory. The cook would pull the dory up so as to get it out from under the fish as the fish was lifted aboard. The doryman would then return aboard the schooner after passing up the coiled and tied warp line and buoy. If more buoys were out with ironed fish, the cook would pass the doryman a quick bite to eat and slack the dory around to the stern, towing the dory and doryman to the next buoy to begin the process over again. The fish invariably towed the buoys in one direction, into the current.

Usually if three fish were ironed, one or two dorymen would be set. If five or six were ironed, a third doryman was sent out. On rare occasions with ten or more fish ironed all dories were sometimes sent out. Swordfish vessels carried 40 to 50 buoys, warps, and strapped darts and irons. Sometimes the buoy kegs would be filled with fresh water to supplement the schooner's water tanks. After emptying, they were rigged for fishing.

Once the swordfish was aboard the schooner the tail was lifted up off the deck. With most of its body on the deck, the sword or bill was removed and the fish was gutted, cleaned, and trimmed of its head, tail, and fins.³⁶ The day's catch was then placed in the

³⁶ "Nova Scotia Fleet Goes Swordfishing," *GDT*, 6 September 1919, 8.

waist of the schooner, penned up so that the fish would not roll around, and covered in canvas that was kept wet until nightfall.

Just before sundown, the men would come down from the masthead and have their supper. They would then go on deck to begin dressing the fish. This involved cutting away all the ties of ligament and muscle tissue around the nape of the fish, slitting it open from the anal vent to the napes, cutting a circle of flesh around the anal, and working the guts through the napes. The kidney blood was then removed by carefully cutting on each side away from the backbone and removing it in a string up through the napes. Then with knives with a rounded blade, all the "sweet meat" was scraped out. This was connective tissue between the flesh and the entrails, which would turn sour unless removed. The interior cavity of the fish was scrubbed with burlap and salt and the backbone was scrubbed with a stiff brush called a "sound broom." The fish was then rinsed and dropped into the hold where it would be buried in the pens with the fish placed head to tail and tail to head in line with the vessel. The space between each fish was filled with crushed ice as was the body cavity of each fish. Because of the great care that was required in icing the fish and the amount of chopped ice needed, three to five men would work in the fish hold.

When the schooner iced up before the trip, all the pens would be filled except one wing pen, which was left half full. They did not put ice up to the coamings in the main hatch. By the time that they reached the fishing grounds the ice level in the hold would have dropped 12" to 18" due to melting. The first seven or eight fish that were caught would be dressed and thrown on top of the ice under the hatch. The wing pen would be broken out. All the fish would be passed on deck and with hand ice picks the crew would chip out enough ice to allow a hold man to get into the half empty pen. He would then start to chop the ice and pass it up to other crewmen on top of the ice using a shovel with a sawed off handle. They would then push this ice away from the hatch way into the other pens. They would then pass down the fish and prepare them as described earlier. "Breaking out" was back breaking work and usually lasted about four or five hours.

When the trip was over, the dories and the schooner would be cleaned and scrubbed down. The vessel would then depart for home. On the way back all of the warps were untied and laid out in great coils with a diameter of about 5". They were thoroughly washed and hung to dry. Fish straps were then made in order to unload the fish when they reached port. These were made by cutting 1" diameter manila rope into 12' long sections. The twines making up the rope were separated into single cords. One end of the first piece was tied to a belaying pin. The second piece was knotted on with a square knot and wrapped around and around with the twine lying alongside the previous loops so that the loops were even. They continued tying on more lengths and looping until they had a continuous loop of about 6'. They then took a twine needle filled with manila

twine and began to bind the strands of the entire main loop with a pair of half hitches until the entire strap was laced together. This type of strap provided more friction when drawn around a fish as it was lifted out of the pen to be put ashore and weighed. It also did not leave any dents such as a hard strap of rope would make in the fish's flesh. Fish buyers would notice any flaws in the fish and the price would drop.

The Great Depression, as well as a drastic drop in the landings of haddock in 1932, created especially hard times. A way was found out of this economic slump through the marketing of a previously underutilized species of fish. Until the mid-1930s ocean perch was regarded as a trash fish. By 1933, it was discovered that ocean perch could successfully be frozen and filleted. When a market was developed in the Midwest, the ocean perch fisheries developed rapidly. The port of Gloucester benefited from this because of its proximity to the Gulf of Maine fishing grounds where the perch were found. Gloucester also had many unused vessels, vacant buildings, and unemployed fishermen that could all be quickly converted to this branch of the fishery. Landings of ocean perch grew from 262,000 pounds in 1933 to 100,000,000 pounds in 1942. Only negligible amounts were landed at Boston. Nearly all of the ocean perch was landed at Gloucester, Portland, or Rockland.³⁷

It was during the 1930s that Gloucester began to surpass Boston as the largest fishing port in terms of the amount of fish landed. The Bay State Fishing Company was running into financial difficulties as its plants and steam trawlers became obsolete. By 1938, General Seafood, which was now nationally recognized, had bought out the Bay State Fish Company. General Seafood used the profits it had gained in part from the successful and innovative marketing of an underutilized species of fish during a period of hard economic times from which many companies in Boston, such as the Bay State Fish Company, could not recover.³⁸

Most vessels dragging out of Gloucester during the 1930s were bringing in ocean perch rather than haddock. A vessel like the GOULART would have been fishing for ocean perch by the mid to late 1930s. The GOULART could carry about 130,000 to 140,000 pounds of fish. This means that at prices of 3.75 cents per pound the share would run about \$270 to \$290 per man for a nine-man crew. The GOULART most likely carried gallows frames on port and starboard sides and was equipped with two sets of trawl doors, one on either side. All boats engaged in fishing for perch had to have a two trawl net capacity. The reason for the necessity of a two net capacity was that the ocean bottom in which vessels trawled for perch was hard considering the composition of the netting that trawlers carried in the 1930s.

³⁷ U.S. Department of Interior, *Groundfish Industries*, 55.

³⁸ German, "Otter Trawling Comes to America," 31.

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These nets were made of sisal or tarred cotton. The tarred cotton was as strong but it resisted rot much better than sisal, which would rot out after only eight trips. Every night after the last set, crewmen worked mending the net for the next day's work. It was very common to tear up a net so badly on the hard bottom that it was necessary to shift to the second trawl rig on the opposite side of the vessel for the next set. While the vessel was trawling from the opposite side the crew was busy mending the damaged net for the next trawl. For this reason, vessels fishing out of Gloucester for perch would carry a complete crew including "twine men" who were responsible for repairing damaged net.

The GOULART's deck layout, as a result of this, would probably have bollards or wire fairleads mounted permanently on the deck with bracing that tied into the deck beams below. By the late 1940s, vessels that converted from dragging to swordfishing in the summer would remove only the starboard gallows frames. The winch and bollards on the starboard side would be covered with canvas but would not be removed.

With the outbreak of World War II, the demand for fresh fish increased to even greater levels because of meat shortages, food commitments to allies, and the food requirements of our own armed forces. Gloucester's total catch in pounds increased from 96,176,000 in 1940 to 213,498,000 in 1945. The fishing fleet accomplished this with 20 percent of its vessel tonnage requisitioned by the United States Government.³⁹

In the early stages of direct American involvement in World War II, the United States was in desperate need of patrol boats for duty along the Atlantic Coast. The Navy gave immediate consideration to the strongest vessels of the Gloucester fishing fleet.⁴⁰ By the mid-1940s, the largest draggers capable of supporting depth charges had all been sold or leased to the Navy. These vessels were used to deter the Germans from laying mines in American waters. They were also assigned to the Coastal Picket Anti-Submarine Patrol. Sailing schooners were particularly hazardous to German submarines since the Germans relied on warning impulses from the vibrating propellers of approaching vessels.⁴¹

Vessels not sold or leased to the Navy acted as specially equipped volunteer observers. These vessels reported enemy submarines to the U.S. Coast Guard using short wave radios. This service enabled the Coast Guard to warn convoys of the presence of submarines and steer clear of the area. The effectiveness of submarines was thus reduced and the Germans, knowing that they had been detected, were forced to move further out

³⁹ David S. Eldridge, "The Gloucester Fishing Fleet during World War II," *The American Neptune* 27 (July 1967): 205-206.

⁴⁰ Fifield, *Along the Gloucester*, 64.

⁴¹ Eldridge, "The Gloucester Fishing Fleet," 203.

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to sea and to remain below the surface to avoid detection.⁴²

The GOULART was part of the volunteer submarine spotting fleet out of Gloucester. The vessel did continue to fish and was not confiscated or altered in any way for spotting submarines. The GOULART's role was to spot and report any submarines to the U.S. Coast Guard by transmitting coded messages using a short wave radio. The Coast Guard would then warn any vessels of the presence of submarines in that area.⁴³

The duty was very hazardous since the Germans were known to open fire on unarmed fishing vessels. The BEN AND JOSEPHINE, captained by Joseph Ciaramitaro, and the AEOLUS, captained by John Johnson, were attacked by a German submarine and riddled with machine gun fire before exploding and sinking. On June 15, 1944, the trawler LARK was attacked, and Captain Abbott reported that he had to take cover behind the pilot house to avoid being hit by shells and bullets. He was forced to lie face down on the deck and could move only by crawling because of the bullets coming at him.⁴⁴

The port of Gloucester responded to the wartime demand for fresh fish by increasing its production by 44 percent. Many records were set in different branches of the fisheries for the total amount of fish landed during a single trip. The GOULART broke several records for the amount of swordfish taken during two trips during the summer of 1945. On July 19, 1945, the GOULART came into Gloucester harbor after a nineteen-day trip. She had been fishing on the northern edge of Georges Bank and had taken 321 swordfish weighing a total of 64,000 pounds and averaging about 200 pounds each. The gross stock for the fish amounted to \$18,345, with each man sharing \$1,200. This trip had broken a record that had been held since 1929, and was probably the biggest catch of swordfish landed by a fishing boat on the East Coast. The vessel carried a crew of eleven men with Manuel Goulart listed as the owner and Manuel Carrico listed as the skipper. Antone Silva served as striker.⁴⁵

The GOULART broke her own record on her very next trip when on August 8, 1945, she returned from a fifteen-day trip with 311 swordfish. She had taken 321 on the first trip, given eight away, and weighed 61,154 pounds for 313 fish. On this trip, four fish were given away and the 307 fish weighed out at 64,348 pounds, with a gross stock of \$19,987. Each of the eleven-man crew earned \$1,262. The vessel had fished on the peak of Browns and Georges Bank. Antone Silva served as striker, with Captain Carrico as

⁴² Fifield, *Along the Gloucester*, 67.

⁴³ EHSSM Oral History Project, interview with Robert Spanks.

⁴⁴ Eldridge, "The Gloucester Fighting Fleet," 209.

⁴⁵ "Sworder Establishes New Record for Single Trip," *GDT*, 20 July 1945, 1.

mastheadman and owner Manuel Goulart as helmsman.⁴⁶

By 1948, Manuel Goulart, now getting on in years, was ready to retire and sell his shares in the GOULART. Captain Carrico formed a partnership with Teutonio Lopes, John Lopes, Agostino Da Silva, all crew members on the GOULART, and Frank Alexander, the owner of a local boat marina. These men purchased all of the shares belonging to the Goulart family, and Manuel Carrico became the principal owner and skipper. It was agreed among them that Carrico would be skipper, since he had held this position for several years before this when Goulart was still principal owner. Carrico had also held 2/16 of the vessel since 1945.

In terms of the vessel's state of preservation, this arrangement was significant. Manuel Goulart had kept the vessel in excellent condition. Manuel Carrico and his partners would meet every year around Christmas time to discuss business and the maintenance of the GOULART. Since most of these men were crew members, the vessel was their livelihood and their safety at sea depended on it being properly maintained. The partners would each put up a sum of money and from this pool any repairs or maintenance was taken care of on a regular basis. The vessel was their number one priority. It is probably for this reason that so much of the GOULART's original construction survives to this day.⁴⁷

By the early 1950s the swordfishing industry began to fade away due to depleted stocks of this fish. This, along with the first significant change in the GOULART's ownership, would mean that many changes would take place. The GOULART would spend the rest of her working life as a fishing dragger, and she became permanently rigged for this type of fishing.

When Manuel Carrico retired in 1977, his son became principal owner. It was during this period that a new engine was put in the GOULART. A newer engine was needed since the vessel would be dragging at greater depths in its search for ground fish and more power was needed to haul back the net.⁴⁸

The Carrico family sold most of their property in Gloucester and relocated in New Bedford in 1977. The GOULART then fished out of New Bedford with Manuel Carrico's son as owner and skipper. The GOULART's working life ended in 1985 when she was hit on the stern during Hurricane Gloria. The vessel managed to make it back to Acushet Fish Pier in Fairhaven. The owners removed the newly installed engine and

⁴⁶ "Another Record Made for Sworder Stock and Share," *GDT*, 9 August 1945, 1.

⁴⁷ EHSSM Oral History Project, Robert Spanks interview.

⁴⁸ EHSSM Oral History Project, Leo Riberio interview.

purchased a steel hulled vessel into which the engine was reinstalled. The GOULART slowly settled to the bottom while the owners decided what to do with her.

At that point, Captain Bob Douglas of Martha's Vineyard was in contact with the Essex Shipbuilding Museum about the possibility of rescuing the GOULART before she was demolished as a hazard to navigation.⁴⁹ In 1989, Douglas hired a diver to inspect the vessel. At his own expense, Douglas raised and hauled the vessel out at Fairhaven. The GOULART was patched and caulked several times while negotiations were under way with the Town of Essex about where the vessel would be hauled out in Essex. It was agreed at an Essex town meeting in May 1990 to lease land next to a town landing to the Essex Historical Society and Shipbuilding Museum on which to haul the GOULART out. The GOULART was fully hauled out December 7, 1990 with the help of hundreds of volunteers. In 1995, the GOULART was again moved from the town landing onto the Essex Shipbuilding Museum Shipyard, a distance of several hundred yards. The GOULART now rests here as an historic ship exhibit. Thus, this "provocative old lady," amidst the mixed reactions of the community, returned to the very shipyard from which she was launched some seventy years before in 1927.

PREVIOUS DOCUMENTATION

In 1991, Wayne T. Butler, a volunteer for the Essex Shipbuilding Museum, surveyed the GOULART's forecastle and after cabin. The results were six detailed sheets of plans of the GOULART's forecastle, which are on file in the Essex Shipbuilding Museum Plans File. Also at the Essex Shipbuilding Museum is a notebook prepared by Wayne Butler containing thirty-one photographs of the original construction in the forecastle with captions on each photo. In addition, the notebook contains twenty-one photographs of the after cabin with captions on each, all of which highlight the original construction therein.⁵⁰

A videotaped interior documentary was conducted by Leon Poindexter, Nancy D'Estang and Roger Hambidge of Mystic Seaport while the GOULART was at Fairhaven. The narrated video details the forecastle and after cabin of the GOULART, pointing out features of the vessel's construction. The video is on loan from Leon Poindexter to the Essex Shipbuilding Museum.

⁴⁹ Captain Robert Douglas is well known on the eastern seaboard as the owner of the Coastwise packet Company. He sails several charter cruise ships out of Vineyardhaven, MA. He is also known as an aficionado of wooden boats and a collector of vintage wooden watercraft.

⁵⁰ EHSSM Collections, accession 92.6.1.

Several photos of the GOULART taken in 1928 depict the vessel as she appeared shortly after launching. One photo shows the vessel under sail and rigged for swordfishing.⁵¹ A photo taken in 1928 from the forecrossrees down onto the deck, depicts the original locations of the deck structures, hardware, and spacing of deck seams.⁵² A photo of the GOULART under construction at the A.D. Story Shipyard in the late spring of 1927, taken by William D. Hoyt, reveals much of the vessel's original construction.

A model of the GOULART by Kenneth Gosner is on display at the Essex Shipbuilding Museum and depicts the GOULART as she appeared at Fulton Fish Market in 1959. In contrast, a model by Dr. William G. Heisey of Hamilton, Massachusetts, is also on loan to the Essex Shipbuilding Museum and is an excellent representation of the GOULART as she appeared in the summer of 1927, shortly after her launching and rigged for swordfishing. Both models are 1/4"=1' scale.

ALTERATIONS AND ADDITIONS

The GOULART was involved in dragging for ground fish from October to April and was fitted out for swordfishing for the rest of the year. This meant that the GOULART would undergo many changes to her deck arrangement and rig as she fitted out for different types of fishing from season to season. These changes would not be permanent nor would they affect the structure of the vessel's hull.

The first permanent modification was to enclose the forecastle companionway with a steel cuddy, which was done in 1928. Most alterations on the GOULART began to appear during the late 1940s when the vessel first changed ownership and when the swordfishing industry began to fade away. The GOULART began to acquire a more permanent rig as a fishing dragger that reflected changes in the type of fishing done and changing market demands for different types of fish.

The pilot house was enlarged and became a permanent structure on the vessel. Prior to this, the pilot house was removed each swordfishing season and reinstalled during the colder months. A photo taken in 1959 by Kenneth L. Gosner and currently at the Mystic Seaport Museum, depicts the enlarged and permanently installed pilot house which now covered most of the after cabin. This photo also depicts the engine exhaust rerouted up through the skylight trunk.

⁵¹ EHSSM Collections, accession 90.15.3.

⁵² EHSSM Collections, accession 90.11.1

A whaleback was constructed over the foredeck and covered it all the way back to the windlass. The whaleback was consistent with the vessel permanently rigged as a dragger since its purpose was to prevent water from rushing on deck in heavy winter seas when the vessel was loaded down with groundfish. There was also the danger of water saturated with kerosene from the kerosene tank in the bow, seeping into the forecastle and coming in contact with the stoves, thereby igniting a fire.

During the 1950s, gallows frames were permanently constructed on the GOULART. These were used to support the wire cables attached to the trawl net as the vessel dragged its net across the ocean bottom, and the winch wound up the cables when hauling back the net.

A more powerful engine was needed by the 1950s, since the vessel was now dragging year round and was fishing at much greater depths.⁵³ The economics of today's fisheries dictate that the cheapest engine per horsepower with low weight be used and that the reduction in pulling power is overcome by increased horsepower. Today's engines burn more fuel and are costly to maintain. The GOULART probably replaced the Cooper Bessemer engine with at least a 350 horsepower, high-speed, diesel engine, which would go through a five to one reduction gear in order to get the same torque that she had with the Cooper Bessemer.

During the 1970s the GOULART's bowsprit was removed and her sternpost was replaced. The whaleback over the bow was extended further aft. The gallows frames as a result, had to be shifted back. The foremast was also stepped further aft on deck, and the mainmast was removed altogether.

A photo of the GOULART, taken in 1959 by Kenneth L. Gosner and now at Mystic Seaport Museum, depicts the GOULART at Fulton Fish Market in New York City. Visible are an enlarged pilot house, steel whaleback over the bow, and gallows frames on both the port and starboard sides. It is clear that by this time the GOULART was permanently rigged for dragging.

The design of the GOULART, as well as most of the alterations done over the years, make no sense unless one considers the changing fishing industry and the fluctuating prices and market demands. The GOULART was a working fishing vessel, designed and built to catch fish and provide an income for her owners and crew. This was her purpose and is reflected in her design and alterations. The alterations were in response to the changing market demands for fish, and to make the vessel a more efficient machine in an ever-changing industry.

⁵³ EHSSM Oral History Project, interview with Leo Riberio and Robert Spanks.

ORIGINAL AND SUBSEQUENT OWNERS AND MASTERS

The general index or abstract of title of the GOULART lists the vessel as being built for Manuel J. Goulart, et al. The owners were Manuel J. Goulart, master and 2/16 owner, Joseph A. Mitchell 6/16, Manuel Roderick 2/16, Augustus Simmons 2/16, Giuseppe Strescino 1/16, Giuseppe Amodeo 1/16, Frederick Rocha 1/16, and Palmodo Mathias 1/16.⁵⁴

By February 15, 1928, Manuel J. Goulart had purchased 4/16 from Joseph Mitchell and Goulart now held 6/16 of the vessel. Joseph Mitchell also sold 1/16 to Manuel Silveria. All other owners remained the same.

Throughout the years Manuel Goulart, or members of his immediate family, purchased most of the shares in the GOULART. Manuel Goulart remained the principal owner. The first significant change occurred in 1944 when Manuel Goulart sold 2/16 to Manuel Carrico, a crew member.⁵⁵

This was significant since by 1948, Manuel Goulart was ready to retire and sell all of his shares in the vessel. Five men pooled their resources in order to purchase the GOULART: Teutonio Lopes, Manuel Carrico, Frank Alexander, John Lopes, and Agostino Da Silva. All were crew members except Alexander. Together they purchased the GOULART from the Goulart family.

There was a dispute over the ownership with another individual who had expressed a desire to purchase the vessel and had placed a down payment on it. Since most of these men were crew members and could purchase all the shares in cash, Goulart sold to them. They were taken to court by the other individual and the judge ruled in their favor since Manuel Carrico already held 2/16 of the vessel, which he had purchased several years

⁵⁴ The fractions listed after the owners' names signify the share in the vessel that each individual held. All information on ownership and shares in the EVELINA M. GOULART was provided by the National Vessel Documentation Center of the United States Coast Guard, unless otherwise stated.

⁵⁵ During the months of July and August 1945, the GOULART had set two records for the most swordfish landed in the port of Gloucester during a single trip. The *Gloucester Daily Times* ran front-page articles on July 20, 1945, and August 9, 1945. Both articles list Manuel Carrico as master and Manuel Goulart as owner. The article states that Manuel Goulart was aboard but had given the responsibility of captain to Manuel Carrico, as well as selling 2/16 of the vessel to him.

before.⁵⁶

On December 27, 1955, the ownership of the vessel was divided thus: Manuel Carrico 5/16, Louis Mathias 1/16, Manuel Dias 1/16, Teutonio Lopes 1/16, Agostino Da Silva 1/16, Frederick Rocha 1/16, Palmodio Mathias 1/16, Manuel Silveria 1/16, Giuseppe Strescino 1/16, Vincent Amodeo 1/16, Frank Alexander 1/16, and John Lopes 1/16. Manuel Carrico remained the principal owner and master. On the same date, the ownership was transferred to the EVELINA M. GOULART Corporation. It remained under this name for the rest of the vessel's working life.

The most significant change during this period was that in 1977 the port of documentation shifted from Gloucester to New Bedford. The reason was that during the 1970s Manuel Carrico retired and turned ownership of the boat over to his son. The Carrico family sold most of their property in Gloucester and moved to New Bedford. They took the GOULART with them and the vessel fished out of New Bedford from 1977 until she was damaged during Hurricane Gloria.⁵⁷

⁵⁶ EHSSM Oral History project, interview with Robert Spanks.

⁵⁷ EHSSM Oral History project, interview with Robert Spanks.

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